

December 2008

Overview

On February 26, 2004, the California Air Resources Board (ARB or Board) adopted the **Transport Refrigeration Unit (TRU) Airborne Toxic Control Measure (ATCM)**. The rulemaking became effective December 10, 2004, and was codified under title 13 California Code of Regulations (CCR), section 2477. The TRU ATCM requires all TRUs and TRU generator sets that operate in California, regardless of where they are based (including out-of-state and out-of-country), to meet in-use performance standards that are phased in beginning December 31, 2008, for model year 2001 and older units. Then, 2002 and subsequent model year units must comply by the end of the seventh year after the model year. All TRUs and TRU gensets must eventually meet the most stringent in-use standard – one that requires a diesel particulate filter that reduces diesel particulate matter exhaust emissions by at least 85 percent. Also, owners of California-based TRUs and TRU gensets must apply for ARB Identification Numbers (IDN) and operators of California-based TRUs must submit Operator Reports.

IDN Applications and Operator Reports Delayed

ARB has delayed the submittal deadlines for the ARB Identification Number (registration) and Operator Report. See TRU Advisory 08-15 for a more detailed revised schedule at the TRU website at: <http://www.arb.ca.gov/diesel/tru.htm>. The IDN application forms for manual submittal will still be finalized and available starting on December 1, 2008, on the TRU website. The Operator Report form will be available at the TRU website in mid-December. IDN applications and Operator Reports can also be submitted electronically using the ARB Equipment Registration (ARBER) system, starting January 6, 2009. ARB will not begin enforcement for late IDN applications and Operator Report submittals until March 16, 2009. The previous compliance deadline for these submittals was January 31, 2009. [TRU Advisory 08-06-R1](#) explains the information that is needed for registering TRUs. Owners with large numbers of units to register in ARBER may request permission to batch upload large data files. The ARBER Batch Upload Permission Form is available for download from the ARBER website at <http://www.arb.ca.gov/arber/batch.htm> and will be accepted starting January 6, 2009. ARBER will accept batch uploads with permission starting January 20, 2009.

U.S. EPA Waiver

On March 28, 2005, ARB requested the U.S. Environmental Protection Agency (U.S. EPA) to grant California authorization (i.e. a waiver of preemption) under the federal Clean Air Act to enforce the ATCM's in-use performance standards. ARB is not required to obtain federal authorization for those provisions of the TRU ATCM intended for the purpose of acquiring emission source information, such as the facility reports, ARB IDN, and Operator Reports. As of late November 2008, U.S. EPA has not acted on the authorization request. ARB anticipates that U.S. EPA will approve the TRU ATCM waiver application in the near future; however, the timing of the approval is uncertain.

ARB Enforcement Policy

Compliance with the first phase of in-use performance standards is required by the TRU ATCM on December 31, 2008. However, ARB will delay the enforcement for six months after the December 31, 2008, initial compliance date, or six months after authorization approval from U.S. Environmental Protection Agency, if approval occurs after the initial compliance date. The six-month grace period will allow carriers time to pursue compliance in good faith and will also address some of the uncertainty that has been caused by U.S. EPA's delay in issuing authorization.

ARB is committed to protecting the public health and plans to aggressively enforce the in-use performance standards. Penalties can be up to \$10,000 per day per unit per violation.

VDECS Verifications

Staff has processed diesel emissions control strategies for TRUs through the Verification Procedure, Warranty, and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (title 13, CCR, sections 2700 through 2710). News about VDECS that can be used to retrofit TRUs is posted on ARB's TRU website at: <http://www.arb.ca.gov/diesel/tru.htm>.

- The Proventia FTF™ is a Level 2 flow-through filter that meets the Low-Emission TRU In-Use Performance Standard (LETRU). Rypos, Inc. is the exclusive U.S. distributor for the Proventia FTF, which is verified for use on all Thermo King model year 1985 through 2002 engines.
- Huss, LLC also has a verified Level 3 diesel particulate filter that meets LETRU and the more stringent Ultra-Low-Emission TRU (ULETRU) In-Use Performance Standard. The Huss FS-MK is verified for use on all TRU engines, regardless of model year, but the manufacturer may limit its use if warranted by excessive soot emissions.

For details, please see the Executive Orders on ARB's Verification website at:

<http://www.arb.ca.gov/diesel/verdev/level2/level2.htm> for Level 2 and

<http://www.arb.ca.gov/diesel/verdev/level3/level3.htm> for Level 3. Applications for two additional Level 2 and three Level 3 VDECS have been submitted and are being evaluated.

Alternative Technologies

Electric Standby retrofits for truck TRUs are feasible, available now, and do not require verification. See TRU Advisory 08-04.

The multi-media assessment for biodiesel may be completed by mid-2009. Because verification will not be completed by December 31, 2008, B100 is not a compliance option for the first compliance phase, but may be for subsequent phases. TRU Advisory 08-08 explains the use of biodiesel as a compliance option.

Pure cryogenic and cold plate systems can be used and they are exempt from the TRU ATCM (if there is no diesel engine used) and therefore do not require verification. If a hybrid cryogenic or cold plate system is used (including both TRU with diesel engine and cryogenic or cold plate system), then diesel engine use must be eliminated at facilities to qualify as a compliance option. [TRU Advisory 08-13](#) explains how the hybrid cryogenic system can be used as a compliance option.

Engine Replacements

Replacing noncompliant TRU engines with a new or newer engine does not meet LETRU, but the compliance date for the replacement engine would be December 31st of the seventh year after the replacement engine's model year. Replacing a noncompliant engine with a rebuilt or remanufactured engine of a newer certified configuration is another compliance option, but again, this just resets the compliance deadline for meeting the TRU ATCM's in-use performance standards. [TRU Advisory 08-05](#) explains the conditions that must be met when using rebuilt engines and the effective model year of the rebuilt engine for determining the new compliance date.

Availability

A list of companies that are providing compliance solutions for the TRU ATCM is posted on the TRU website: <http://www.arb.ca.gov/diesel/tru.htm>, then click on the document link: "TRU ATCM Compliance Option Contacts".

Cost Effectiveness

Cost of compliance for VDECS retrofits range from \$4,000 to \$7,000. Engine replacements range from \$4,000 to \$10,000. Although the cost of compliance is greater than anticipated during rule development, the TRU ATCM's cost-effectiveness, expressed as dollars per pound of pollutant reduced, is still within the range of other diesel emission control measures' cost-effectiveness that have been adopted by the Board. These costs obviously affect a business' profitability and TRU fleets are encouraged to revise their business plans and shipping rates accordingly.

Compliance Assistance Documents

Compliance assistance materials and TRU Advisories are available at the ARB's TRU website at: <http://www.arb.ca.gov/diesel/tru.htm>. A list of TRU ATCM advisories can be found by clicking on the "Advisories" link in the left navigation bar on the TRU website. "TRU Brochure #2" and "TRU ATCM Tutorial" are available in English and Spanish.

For More Information

Past TRU ATCM Status Updates are available through the archive link of the TRU website. If you have questions, please call ARB's toll-free TRU Help Line at 1-888-878-2826 (1-888-TRU-ATCM). Visit ARB's TRU web site at <http://www.arb.ca.gov/diesel/tru.htm>. You may also send emails to the TRU email address: tru@arb.ca.gov. Regulatory documents may be viewed and downloaded from <http://www.arb.ca.gov/regact/trude03/trude03.htm>.

If you are handicapped, you may obtain this document in an alternative format. Contact ARB's ADA Coordinator at (916) 322-4505 (voice); (916) 324-9531 (TDD, Sacramento area only); or (800) 700-8326 (TDD, outside Sacramento).